

STATUS OF PIPING PLOVERS IN MASSACHUSETTS:
1987 SUMMARY

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Observers reported a total of 126 breeding pairs of Piping Plovers (*Charadrius melodus*) from 49 sites in Massachusetts in 1987 (Table 1). The 1987 total was lower than in either of the previous 2 years - 139 pairs (1986) and 132 pairs (1985). Observer effort in 1987, measured as number of sites surveyed and intensity of census efforts at each site, was greater than in 1985 and at least comparable to that in 1986. Thus, we believe the 1987 census results reflect a real population decline.

We define breeding pairs as pairs that are observed with either a nest or unfledged chicks, or that exhibit site tenacity and evidence of pair bonding and territoriality. Single birds that are observed during the breeding season and exhibit agitated, site tenacious behavior or distraction displays when approached are generally considered indicative of a breeding pair at a site.

Breeding plovers were present at coastal sites from Plum Island south to the Rhode Island border and east to Cape Cod and Nantucket. All but 10 pairs (92%) occurred south of Boston, and 66 pairs (52%) occurred at sites on Cape Cod. More specifically, 10 pairs (8%) occurred at sites on the North Shore (New Hampshire border south to Boston), 10 pairs (8%) along the South Shore (Boston south to the Cape Cod Canal), 29 pairs (23%) at lower Cape Cod sites (Cape Cod Canal east to Brewster and Harwich), 37 pairs (29%) on the outer Cape (Chatham and Monomoy NWR north to Provincetown), 20 pairs (16%) along the west shore of Buzzards Bay (Wareham south to Rhode Island border) and 20 pairs (16%) on the outer islands (Elizabeth Islands east to Nantucket).

Mean number of pairs per site was 2.6, with a range of 1 to 8 pairs per site. Thirty-nine sites with 3 or fewer pairs accounted for 80% of the state's population. Only 7 sites reported 6 or more pairs. This distribution pattern continues to dictate that management efforts for Piping Plovers in Massachusetts be directed at many different sites with relatively few pairs of plovers per site.

In 1987 Piping Plovers were present at 6 sites where they had been absent in 1986 and at 3 additional sites that were not surveyed in 1986. Conversely, plovers were absent in 1987 from 11 sites where they had been present in 1986. One site where plovers were present in 1986 (Muskeget Island, 2 pairs) was not censused in 1987.

Overall mean productivity for the state was 1.1 chicks fledged per nesting female, based on data reported for 89 breeding pairs (71% of state total) at 32 sites (65% of total). Productivity was

highly variable between sites and ranged from 0 chicks fledged (12 sites) to highs of 3 and 4 chicks fledged per female (Crane Beach and Richmond Pond, respectively). Threats at various sites included disturbance or direct mortality of eggs and chicks from recreational beach-users, off-road vehicles, and dogs, mammalian predation (foxes, skunks, raccoons, and a suspected feral cat), and avian predation (gulls and crows). A management "first" in 1987 was the successful use of wire predator exclosures to protect 5 plover nests from mammalian predation at Crane Beach, Scorton Creek, and Coast Guard Beach.

We categorized the intensity of management efforts (census and protection) for Piping Plovers at all 49 breeding sites in 1987, using the following 3 categories:

- 1) Intensive Management - Systematic monitoring occurred during the breeding season (at least weekly); active protection from human disturbance provided to majority of nests where necessary; landowner or management authority involved in or committed to management program.
- 2) Limited Management - Systematic monitoring occurred, but active protection program lacking or limited, or indirect protection of habitat occurred without systematic monitoring. Landowner or management authority may not be involved in or committed to management.
- 3) No Management - No management beyond one-time or sporadic visits to site.

Statewide, 27 of 49 sites (55%) representing 60% of the population were intensively managed for Piping Plovers in 1987. Twelve sites (25%) representing 23% of the population received limited management, and 10 sites (20%) representing 17% of the population were classified as receiving no management attention. This is significant progress since 1983, when censusing and protection of Piping Plovers in Massachusetts was much more limited and largely incidental to tern conservation activities. More intensive and sustained management efforts will be necessary, however, if we are to reverse the population decline that was evidenced in 1987.

The ownership pattern of Piping Plover nesting sites has an important bearing on the implementation of management programs. In 1987, 76% of Massachusetts' plover population occurred on town or privately-owned properties (Table 2). Another 22% of the state's population occurred on properties owned or managed by the National Park Service or the Fish and Wildlife Service, 2 federal agencies with active Piping Plover management programs. Implementation of an effective statewide recovery program for Piping Plovers continues to require the efforts and cooperation of a large and varied group of land management agencies and organizations and private individuals. We acknowledge the efforts of all who were involved in plover conservation activities in Massachusetts in 1987. Thanks!

Table 1. Summary of numbers of pairs of breeding Piping Plovers censused in Massachusetts in 1986 and 1987.

| Location | No. of pairs | |
|--|-----------------|------|
| | 1986 | 1987 |
| NORTH SHORE | | |
| for year 1986 3190 Salisbury Beach, Salisbury 3261 | nd ^a | 0 |
| 91 Parker River NWR, Newbury 3262 | 3 | 2 |
| 92 Plum Island State Park, Ipswich 63 | 1 | 2 |
| 3193 Crane Beach, Ipswich 3264 | 5 | 6 |
| SOUTH SHORE | | |
| 3194 Third Cliff, Scituate 3265 | 3 | 2 |
| 95 Fourth Cliff, Scituate 66 | 1 | 0 |
| 96 Duxbury Beach, Duxbury 67 | 6 | 5 |
| 3197 Plymouth Beach, Plymouth 3268 | 4 | 3 |
| BUZZARDS BAY | | |
| 3198 Stony Point Dike, Wareham 3269 | 0 | 2 |
| 99 Long Beach Point, Wareham 70 | nd | 0 |
| 3200 West Island Beach, Fairhaven 71 | 1 | 2 |
| 01 Little Beach, Dartmouth 72 | 7 | 7 |
| 02 Barneys Joy, Dartmouth 73 | 2 | 1 |
| 03 Gooseberry Neck, Westport 74 | 1 | 0 |
| 04 Horseneck Beach, Westport 75 | 7 | 5 |
| 05 Acoaxet Beach, Westport 76 | 1 | 1 |
| 3206 Richmond Pond, Westport 3277 | 3 | 2 |
| UPPER LOWER CAPE | | |
| 3207 Black Beach, Falmouth 3278 | 1 | 1 |
| 08 Washburn Island, Falmouth 79 | nd | 0 |
| 09 South Cape Beach, Mashpee 80 | 2 | 2 |
| 10 Popponesset Beach, Mashpee 81 | nd | 1 |
| 11 Town Neck Beach, Sandwich 82 | 2 | 2 |
| 12 Springhill Beach, Sandwich 83 | 1 | 2 |
| 13 Scorton Creek, Sandwich 84 | 7 | 6 |
| 14 Sandy Neck, Barnstable 85 | 6 | 7 |
| 3215 Dead Neck-Sampson's Is., Barnstable 3286 | 2 | 3 |

Table 1. Continued

| Location | | No. of pairs | |
|-------------------------------------|------|--------------|------|
| | | 1986 | 1987 |
| LOWER CAPE (continued) | | | |
| 3216 Long Beach, Barnstable | 8887 | 2 | 2 |
| 17 Kalmus Park Beach, Hyannis | 88 | nd | 1 |
| 18 Gray's Beach, Yarmouth | 89 | 1 | 0 |
| 19 Seagull Beach, Yarmouth | 90 | 1 | 0 |
| 20 Radio City, Yarmouth | 91 | 1 | 0 |
| 21 West Dennis Beach, Dennis | 92 | 2 | 2 |
| 3222 Chapin Beach, Dennis | 93 | nd | 0 |
| LOWER OUTER CAPE | | | |
| 3223 Harding's Beach, Chatham | 3294 | 2 | 3 |
| 24 Morris Island Dike, Chatham | 95 | 2 | 1 |
| 25 North Monomoy Is., Chatham | 96 | 3 | 2 |
| 26 South Monomoy Is., Chatham | 97 | 4 | 3 |
| 27 North Beach, Chatham and Orleans | 98 | 7 | nd |
| 28 South Beach Is., Chatham | 99 | b | 6 |
| 29 Nauset Heights, Orleans | 3300 | 2 | 4 |
| 30 New Island, Orleans and Eastham | 01 | 3 | 1 |
| 31 Coast Guard Beach, Eastham | 02 | 13 | 8 |
| 32 Marconi Beach, Eastham | 03 | 2 | 2 |
| 33 Jeremy Point, Wellfleet | 04 | 1 | 2 |
| 34 Corn Hill Beach, Truro | 3305 | 1 | 0 |
| 35 Pilgrim Beach, Truro | 06 | 2 | 2 |
| 36 High Head, Provincetown | 07 | 0 | 1 |
| 37 French's (Exit 9), Provincetown | 08 | 0 | 0 |
| 38 Race Point, Provincetown | 09 | 0 | 2 |
| 3239 Wood End Light, Provincetown | 3310 | 0 | 0 |
| EUNDALETH | | | |
| OUTER ISLANDS | | | |
| 3240 Naushon Island, Gosnold | 3311 | 0 | 0 |
| 41 Pasque Island, Gosnold | 12 | 3 | 2 |
| 3242 Nashawena Island, Gosnold | 3313 | 2 | 0 |

Table 1. Continued

| Location | No. of pairs | |
|---|--------------|------|
| | 1986 | 1987 |
| ELIZABETH | | |
| OUTER ISLANDS (continued) | | |
| 3243 Cuttyhunk Island 3314 | 4 | 6 |
| Martha's Vineyard | | |
| 3244 Tashmoo, Tisbury 3315 | nd | 1 |
| 45 State Beach, Edgartown 16 | 1 | 0 |
| 46 Harthaven, Oak Bluffs 17 | 1 | 1 |
| 47 Long Beach, Gay Head 3318 | nd | 2 |
| 48 Cape Pogue Elbow, Chappaquidick 3319 | 1 | 0 |
| 3249 East Beach, Chappaquidick 3320 | 1 | 0 |
| Nantucket | | |
| 3250 Great Point/The Galls 3321 | 4 | 2 |
| 51 Wauwinet 3322 | 1 | 1 |
| 52 Quidnet 23 | 0 | 0 |
| 53 Siasconset 24 | 0 | 1 |
| 54 Low Beach 25 | 2 | 1 |
| 55 Surfside 26 | 0 | 1 |
| 56 Smith's Point 27 | 1 | 1 |
| 57 Whale Island 28 | 1 | 0 |
| 58 Tuckernuck Island 29 | 0 | 1 |
| 3259 Muskeget Island 3330 | 2 | nd |
| Total | 139 | 126 |

^and = no data available

^bSouth Beach Island was created in January 1987 when a storm breached the southern end of North Beach.

Table 2. Summary of ownership of sites in Massachusetts with breeding pairs of Piping Plovers, 1987.

| Ownership | No. of sites (%) | No. of pairs of plovers (%) |
|--------------------------------|-----------------------|-----------------------------|
| Federal | | |
| National Park Service | 5 (10) | 15 (12) |
| U.S. Fish and Wildlife Service | 3 (6) | 7 (6) |
| State | | |
| Dept. Environmental Management | 3 (6) | 7 (6) |
| Town | 18 (35) | 46 (36) |
| Private | | |
| The Trustees of Reservations | 3 (6) | 9 (7) |
| Mass. Audubon Society | 2 (4) | 4 (3) |
| Other landowners | 17 (33) | 38 (30) |
| Total | 51 ^a (100) | 126 (100) |

^a West Island Beach is tallied twice because of town and private ownership; Horseneck Beach is tallied twice because of state and town ownership.